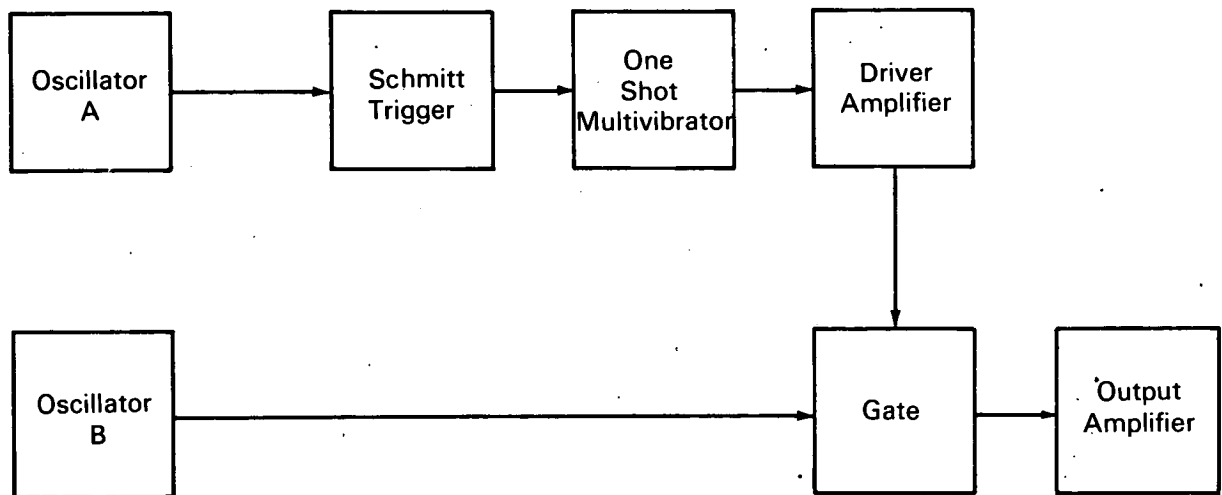


NASA TECH BRIEF



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A Calibration Means for Spectrum Analyzers



The problem:

To provide a means for rapid calibration of spectrum analyzers. Present methods use internal crystal-controlled markers at only one given frequency and spacing, thus limiting overall measurable accuracy. An external signal generator with a known frequency can be used but is very time consuming.

The solution:

A spectrum analyzer calibration system that is rapid and provides an accurate family of adjustable markers at any point in the spectrum.

How it's done:

Oscillator A drives the Schmitt trigger that in turn inhibits the one-shot multivibrator. The output pulse width is determined by selection of timing capacitors and a variable resistor, manually operated from a front panel. The one-shot multivibrator output is fed

to a driver amplifier that in turn operates a gate that controls the signal supplied by oscillator B. The number of markers is determined by the pulse width controls and the unit will operate with a repetition rate from 300 cps to 40 kc at a center frequency from 10 kc to 2 Mc.

Notes:

1. Used as an airborne system, selective calibration of various spectral data could be readily accomplished by replacing the oscillators A and B with VCO's controlled by ground based telemetry.
2. Inquiries concerning this invention may be directed to:

Technology Utilization Officer
Manned Spacecraft Center
Houston, Texas 77058
Reference: B67-10254

(continued overleaf)

Patent status:

Inquiries about obtaining rights for the commercial use of this invention may be made to NASA, Code GP, Washington, D.C. 20546.

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(MSC-10987)